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ACTON RESEARCH CORPORATION

BOX 304 / 525 MAIN STREET / ACTON, MASSACHUSETTS 01720 / (617) 263-3721

ARC**PRODUCT DATA****NO. 230**

Optical Coatings/Replica Optics/Vacuum UV Test Facilities/Vacuum UV Laser Optics

Vacuum UV Laser Optics

Acton Research Corporation has combined their more than ten years of experience in producing high quality vacuum UV coatings with specialized coating and testing equipment, to now offer high efficiency vacuum UV laser optical components. These components are specifically designed for optimum efficiency in the vacuum UV region and are carefully tested prior to shipment so as to assure customer satisfaction.

VACUUM UV LASER MIRRORS, PARTIALLY TRANSMITTING**Concave MgF₂ Mirrors**

| Dia. (Inches) | Radius of Curvature (Meters) | Catalog No. | Price |
|------------------|------------------------------------|-------------|------------|
| ½ | 0.25 to 6.0 | LM-230-1C | On Request |
| ¾ | 0.25 to 6.0 | LM-230-2C | |
| 1 | 0.25 to 6.0 | LM-230-3C | |

Concave Fused Silica Mirrors

| Dia. (Inches) | Radius of Curvature (Meters) | Catalog No. | Price |
|------------------|------------------------------------|-------------|----------|
| ½ | 0.25 to 6.0 | LS-230-1C | \$155.00 |
| ¾ | 0.25 to 6.0 | LS-230-2C | \$165.00 |
| 1 | 0.25 to 6.0 | LS-230-3C | \$175.00 |

SPECIFICATIONS

- Material - Vacuum UV Grade MgF₂ and Fused Silica
- Surface Finish - Laser grade for minimum light scattering
- Sphericity - Within 1/10 wavelength 5461A
- Back Surface - Polished flat to within 1/2 wavelength 5461A
- Coating - As required for high reflectance and partial transmission in the 1200A - 2000A region

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Flat MgF₂ Mirrors

| Dia. (Inches) | Thickness (Inches) | Catalog No. | Price |
|------------------|-----------------------|-------------|------------|
| ½ | 1/8 | LM-230-1F | On Request |
| ¾ | 3/16 | LM-230-2F | |
| 1 | 3/16 | LM-230-3F | |

Flat Fused Silica Mirrors

| Dia. (Inches) | Thickness (Inches) | Catalog No. | Price |
|------------------|-----------------------|-------------|----------|
| ½ | 1/8 | LS-230-1F | \$140.00 |
| ¾ | 3/16 | LS-230-2F | \$150.00 |
| 1 | 3/16 | LS-230-3F | \$160.00 |

SPECIFICATIONS

- Material - Vacuum UV Grade MgF₂ and Fused Silica
- Surface Finish - Laser grade for minimum light scattering
- Flatness - Within 1/10 wavelength 5461A
- Back Surface - Polished flat to within 1/2 wavelength 5461A
- Coating - As required for high reflectance and partial transmission in the 1200A - 2000A region

PLANE GRATING END REFLECTORS

| Dia. (Inches) | Grooves Per Millimeter | Blaze Wavelength | Thickness (Inches) | Coating | Price |
|------------------|---------------------------|---------------------|-----------------------|-----------------------|----------|
| ½ | 600 | 2000A | 3/16 | Al + MgF ₂ | \$100.00 |
| ½ | 1200 | 2000A | 3/16 | Al + MgF ₂ | \$150.00 |
| ¾ | 600 | 2000A | 1/4 | Al + MgF ₂ | \$125.00 |
| ¾ | 1200 | 2000A | 1/4 | Al + MgF ₂ | \$175.00 |
| 1 | 600 | 2000A | 1/4 | Al + MgF ₂ | \$150.00 |
| 1 | 1200 | 2000A | 1/4 | Al + MgF ₂ | \$200.00 |

SPECIFICATIONS

- Blank Material - Fused Silica
- Flatness - Within 1/10 wavelength 5461A
- Back Surface - Ground Flat

HIGH REFLECTANCE VACUUM UV LASER MIRRORS

FRONT SURFACE, CONCAVE SPHERICAL MIRRORS

| Dia. (Inches) | Radius of Curvature (Meters) | Catalog No. | Price |
|------------------|------------------------------------|-------------|----------|
| ½ | 0.25 | C-220-1C | \$100.00 |
| ½ | 0.50 | C-220-2C | \$100.00 |
| ½ | 1.0 | C-220-3C | \$100.00 |
| ½ | 2.0 | C-220-4C | \$100.00 |
| ½ | 3.0 | C-220-5C | \$100.00 |
| ½ | 4.0 | C-220-6C | \$100.00 |
| ¾ | 0.25 | C-220-7C | \$105.00 |
| ¾ | 0.50 | C-220-8C | \$105.00 |
| ¾ | 1.0 | C-220-9C | \$105.00 |
| ¾ | 2.0 | C-220-10C | \$105.00 |
| ¾ | 3.0 | C-220-11C | \$105.00 |
| ¾ | 4.0 | C-220-12C | \$105.00 |
| 1 | 0.25 | C-220-13C | \$110.00 |
| 1 | 0.50 | C-220-14C | \$110.00 |
| 1 | 1.0 | C-220-15C | \$110.00 |
| 1 | 2.0 | C-220-16C | \$110.00 |
| 1 | 3.0 | C-220-17C | \$110.00 |
| 1 | 4.0 | C-220-18C | \$110.00 |

| Dia. (Inches) | Radius of Curvature (Meters) | Catalog No. | Price |
|------------------|------------------------------------|-------------|----------|
| 1½ | 0.25 | C-220-19C | \$116.00 |
| 1½ | 0.50 | C-220-20C | \$116.00 |
| 1½ | 1.0 | C-220-21C | \$116.00 |
| 1½ | 2.0 | C-220-22C | \$116.00 |
| 1½ | 3.0 | C-220-23C | \$116.00 |
| 1½ | 4.0 | C-220-24C | \$116.00 |
| 2 | 0.25 | C-220-25C | \$125.00 |
| 2 | 0.50 | C-220-26C | \$125.00 |
| 2 | 1.0 | C-220-27C | \$125.00 |
| 2 | 2.0 | C-220-28C | \$125.00 |
| 2 | 3.0 | C-220-29C | \$125.00 |
| 2 | 4.0 | C-220-30C | \$125.00 |
| 3 | 0.25 | C-220-31C | \$185.00 |
| 3 | 0.50 | C-220-32C | \$185.00 |
| 3 | 1.0 | C-220-33C | \$185.00 |
| 3 | 2.0 | C-220-34C | \$185.00 |
| 3 | 3.0 | C-220-35C | \$185.00 |
| 3 | 4.0 | C-220-36C | \$185.00 |

SPECIFICATIONS

| | |
|----------------|---|
| Coating | - Al + MgF ₂ for optimum reflectance below 2000A |
| Material | - Fused Silica, Pyrex, Cer-Vit |
| Surface Finish | - Laser grade for minimum light scattering |
| Sphericity | - Within 1/10 wavelength 5461A |
| Back Surface | - Ground Flat |

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FRONT SURFACE, FLAT MIRRORS

| Size (Inches) | Thickness (Inches) | Catalog No. | Price |
|------------------|-----------------------|-------------|----------|
| ½ Dia. | 3/16 | A-220-1DS | \$ 95.00 |
| ¾ Dia. | 1/4 | A-220-1D | \$100.00 |
| 1 Dia. | 1/4 | A-220-2D | \$105.00 |
| 1½ Dia. | 3/8 | A-220-3D | \$115.00 |
| 2 Dia. | 3/8 | A-220-4D | \$120.00 |
| 3 Dia. | 1/2 | A-220-5D | \$180.00 |

| Size (Inches) | Thickness (Inches) | Catalog No. | Price |
|------------------|-----------------------|-------------|----------|
| ½ x ½ | 3/16 | B-220-1RS | \$110.00 |
| ¾ x ¾ | 1/4 | B-220-1R | \$120.00 |
| 1 x 1 | 1/4 | B-220-2R | \$145.00 |
| 1½ x 1½ | 3/8 | B-220-3R | \$260.00 |
| 2 x 2 | 1/2 | B-220-4R | \$285.00 |
| 3 x 3 | 3/4 | B-220-5R | \$350.00 |

SPECIFICATIONS

| | |
|----------------|---|
| Coating | - Al + MgF ₂ for optimum reflectance below 2000A |
| Material | - Fused Silica, Pyrex, Cer-Vit |
| Surface Finish | - Laser grade for minimum light scattering |
| Flatness | - Front surface flat to within 1/10 wavelength 5461A |
| Back Surface | - Ground Flat |

Note: Each of the above listed mirrors is available with a drilled central hole, add \$30.00 to Catalog Price

ACTON RESEARCH CORPORATION Box 304/525 Main Street/Acton, Massachusetts 01720/(617) 263-3721

Represented By: **McPHERSON INSTRUMENT CORP.** 530 Main Street, Acton, Mass. 01720 (617) 263-7733